REMARKS

Claims 1, 3-31, 33-37, 40, 41, 43-46, 50-59, and 64-66 are pending. Claims 1, 6, 30, 37, 40, and 50 have been amended and claims 2, 32, 38, 39, 42, 47-49, and 60-63 have been canceled. It is respectfully submitted that entry of this paper is proper, as all of the features added by amendment have been considered by the Examiner during his previous examination of the application.

Reconsideration of the application is respectfully requested for the following reasons.

I. Claims 1, 3, 30, 40, and 55

In the Final Office Action, the above-noted claims were rejected under 35 USC § 103(a) in view of a Sylvain-Olds combination. This rejection is traversed for the following reasons.

A. Claim 1

Claim 1 recites that a first mobile terminal transmits state information to a second mobile terminal through a base station, wherein the state information is "to inform the second mobile terminal that a call was released based on a low signal strength of the first mobile terminal."

The Sylvain publication discloses transmitting state information of a first mobile terminal to a second mobile terminal. Sylvain further discloses that this information be transmitted after a call has been completed between the terminals. However, Sylvain does not disclose that the state information is indicative of a low signal strength of first mobile terminal.

More specifically, the state information disclosed in the Sylvain publication indicates the following: an on-hook/off-hook condition of one of the terminals, one of the terminals is currently on a call, one of the terminals is not connected to a packet-switched network, a caller is on

hold, or a call is in a specific location. However, the Sylvain publication does not disclose that the state information of a first mobile terminal transmitted to a second mobile terminal is indicative of a low signal strength (e.g., low RSSI) of first mobile terminal in a mobile network as in claim 1.

Claim 1 further recites that "the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level." The Slyvain publication also fails to teach or suggest these features.

To make up for the deficiencies of Sylvain, the Olds patent was cited.

The Olds patent discloses a system for routing signals between two terminals, i.e., an originating terminal and a receiving terminal. This routing involves transmitting a signal from the originating terminal through a series of intervening (neighboring) subscriber units (RSUs) until the signal finally reaches the receiving terminal. The purpose of the Olds patent is therefore to control the routing of these signals through a plurality of RSUs that are situated between the originating and receiving terminals.

In performing this routing function, each subscriber unit (RSU) routes signals according to a routing table. When a one RSU receives a packet 60 from another RSU, the first RSU sends the second RSU an acknowledgment message 78. This acknowledgment message includes a field 82 having an indicator of the quality of the signal which conveyed packet 60. When the acknowledgment message is received, the second RSU analyzes the signal quality indicator field and re-routes future signals to a different RSU if the signal quality indicator was low. (See column 5, lines 25-29, column 8, lines 44-60, and column 14, lines 1-5).

The signal quality indicator in field 82, therefore, does not provide an indication of the signal quality of the originating terminal, but the quality of the signal transmitted by one RSU to another, which RSUs are distantly located relative to the originating terminal. (See again column 5, lines 25-29, column 8, lines 44-60, and column 14, lines 1-5 with reference to Figure 1).

The Olds patent, therefore, does not teach or suggest the features of claim 1 missing from the Sylvain publication. That is, the Olds patent discloses transmitting a signal quality indicator from one RSU to another. However, Olds does not teach or suggest that this indicator provides an indication of a low signal strength of the "first terminal" (e.g., the originating terminal) as required by claim 1. Rather, the signal quality indicator (in field 82 of acknowledgment message 78) provides an indication of the quality of a signal transmitted from one RSU to another.

Moreover, the Olds patent does not teach or suggest that the originating terminal even transmits information indicative of its signal strength of any kind or at any time, let alone at a time after a call was released as a result of the low signal strength.

The Olds patent also fails to teach or suggest that "the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level."

To include these features would, first, require the receiving terminal in Olds to monitor the signal strength of the originating terminal. Olds does not teach or suggest that its originating terminal performs this function. Rather, Olds merely discloses that one intervening RSU

monitors the signal quality of another RSU along a intervening signal route between the originating and receiving terminals.

Olds also fails to teach or suggest performing an automatic call connection operation to re-establish a released call when the signal strength of the first mobile terminal exceeds a predetermined level, e.g., returns to a certain signal strength for sustaining the call.

In addition to these features, claim 1 further recites that "one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal." The Olds patent does not teach or suggest these features, i.e., in Olds the signal quality indicator in field 82 is transmitted between RSUs that are located along a routing path between the originating and receiving terminals. Olds does not teach or suggest: (1) transmitting signal quality information from the originating terminal to the receiving terminal, (2) that one of the originating or receiving mobile terminals monitor the other's signal strength after a call release occurs, and (3) that an automatic call connection operation is performed to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level.

In view of the foregoing considerations, it is therefore clear that the Sylvain publication and Olds patent do not teach or suggest all the features of claim 1, whether those references are taken individually or in combination. Accordingly, such a combination of references cannot be relied on to establish a *prima facie* case of obviousness of claim 1 or any of its dependent claims. Withdrawal of the § 103(a) rejection of claim 1 and furtherance of this claim and its dependent claims to allowance is therefore respectfully requested.

B. Claims 30, 40, and 55

Claim 30 recites "transmitting information indicative of the operational state to a second mobile terminal, the second mobile terminal outputting a relative signal strength indicator (RSSI) of the first mobile terminal based on the transmitted operational state information." These features are not taught or suggested by the Sylvain publication and Olds patent, whether taken alone or in combination. See remarks provided above with respect to claim 1.

Claim 40 recites "displaying the operational state information on a second mobile terminal, wherein the operational state information includes at least one of signal strength information or battery information of the first mobile terminal." These features are not taught or suggested by the Sylvain publication and Olds patent, i.e., neither reference teaches or suggests displaying the specific type of information recited in claim 40.

Claim 55 recites: (1) a transmitter which transmits information indicative of the operational state of the terminal to a base station, (2) a receiver which receives information indicative of an operational state of another terminal, and (3) a controller which performs an automatic call connection operation to re-establish a call with the mobile terminal when the operational state information of the other terminal is determined to lie within a predetermined range. These features are not taught or suggested by the Sylvain publication and Olds patent, whether taken alone or in combination. See remarks provided above with respect to claim 1.

In addition, claims 30, 40, and 55 all recite that one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal. These features further distinguish claims 30, 40, and

55 from Olds.

Based on the aforementioned differences, it is respectfully submitted that claims 30, 40, 55, and their dependent claims are allowable.

II. Claim 4

Claim 4 was rejected under 35 USC § 103(a) for being obvious in view of a Sylvain-Toda-Hayashi combination. Applicants submit that this rejection is improper as a matter of form. Claim 4 depends from claim 1. Claim 1 was rejected under § 103(a) based on a combination of references different from those used to reject claim. Accordingly, the form of the rejection is improper.

Notwithstanding this improper form, Applicants submit that claim 4 is allowable over a Sylvain-Toda-Hayashi combination. Claim 4 recites that the first mobile terminal includes "a mobile station modem unit which . . . senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure, and performs an automatic call connection function in response to the second call connection release." As previously discussed, the Sylvain publication does not teach or suggest these features, and neither do the Toda and Hayashi references.

The Toda patent discloses a mobile terminal which detects its own signal strength and then automatically re-initiates a call when its own signal strength exceeds a predetermined value. The Toda patent does not teach or suggest the features of claim 4 missing from the Sylvain publication. Hayashi is also deficient in this respect as Hayashi was only cited for its disclosure of a folder detector.

III. Claims 5 and 6

Claims 5 and 6 were rejected under 35 USC § 103(a) for being obvious in view of a Sylvain-Olds-Chapman combination. These rejections are traversed for the following reasons.

Claim 5 depends from claim 1. Therefore, in order to render claim 5 obvious, the Chapman patent must teach or suggest all the features of claim 1 missing from the Sylvain and Olds references. The Chapman patent discloses storing signal strength values for mobile terminals in a base station. However, Chapman does not teach or suggest the features (discussed above) missing from Sylvain and Old. Therefore, it respectfully submitted that claim 5 is allowable, at least by virtue of its dependency from claim 1.

Claim 6 recites storing, in a base station, state information transmitted from a first mobile terminal, where "the state information [is] indicative of a signal strength of the first mobile terminal." Claim 6 then recites transmitting this signal strength information from the first mobile terminal to a second mobile terminal. The Sylvain publication does not teach or suggest transmitting signal strength information of one mobile terminal to another mobile terminal.

Moreover, in the Office Action, the Examiner noted that Sylvain system stores state information of one terminal for transmission to another terminal. However, unlike claim 6, Sylvain stores that information in a presence system 20. See Paragraph [0025] of Sylvain – i.e., "presence system 20 . . . operates to collect state information for various devices . . ." The Sylvain publication does not disclose that the base stations mentioned in Paragraph [0022] perform the function of storing state information of one mobile terminal for transmission to another mobile terminal.

The Olds and Chapman patents do not teach or suggest all the features missing from the Sylvain publication, including the additional feature added by amendment to claim 6 that "one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal."

Based on these differences, it is respectfully submitted that claim 6 and its dependent claims are allowable.

IV. Claims 7-10, 12-14, and 16-20

Claims 7-10, 12-14, and 16-20 were rejected under 35 USC § 103(a) for being obvious in view of a Sylvain-Olds-Toda-Chapman combination. Claims 7-10 depend from claim 6. The references forming this present combination do not teach or suggest, either individually or collectively, all of the features recited in claim 6. Accordingly, it is submitted that claims 7-10 are allowable at least by virtue of their dependency from claim 6.

Claim 12 recites "when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure" and "when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal."

Regarding Sylvain, this publication stores state information which indicates an on-hook/off-hook condition of one of the terminals, one of the terminals is currently on a call, one of the terminals is not connected to a packet-switched network, that a caller is on hold, or that a call is in a specific location. The Sylvain publication does not teach or suggest that when the call connection

between the terminals is interrupted, checking whether the call has been interrupted because of a network failure" and "when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal." The Olds patent also fails to teach or suggest these features.

The Toda and Chapman patents are also deficient in this respect, i.e., Toda only discloses detecting its own signal strength for purposes of performing an automatic recall operation and Chapman also does not transmit state information of one terminal to another terminal.

Based on these differences, it is respectfully submitted that claim 12 and its dependent claims are allowable.

V. Claim 11

Claim 11 was rejected for being obvious in view of a Sylvain-Toda-Hayashi combination. This rejection is in improper form because it does not include the Olds patent. Nevertheless, Applicants respectfully submit that claim 11 is allowable on grounds that the features of base claim 6 are not taught or suggested by the cited combination of references, taken with or without Olds.

VI. Claim 15

Claim 15 was rejected for being obvious in view of a Sylvain-Olds-Toda-Hayashi combination. Applicants submit that claim 15 is allowable on grounds that the features of base claim 12 are not taught or suggested by the cited combination of references.

VII. Claim 21, 23, 25, 31, 33-36, 41, 43-46, and 56-58

These claims were rejected for being obvious in view of a Sylvain-Toda combination.

Claim 21 recites "sensing whether a received signal strength transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored to a level sufficient to make a call available," "when the received signal strength is restored, automatically attempting a recall based on a phone number stored in a memory," and "displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal." (Emphasis added).These features are not taught or suggested by the Sylvain and Toda references, whether taken alone or in combination.

Claim 23 is allowable based on the features recited in its base claim.

Claims 31 and 33-36 are allowable based on the features recited in base claim 30.

Claims 41 and 43-46 are allowable based on the features recited in base claim 40.

Claims 56-58 are also allowable, at least by virtue of the features recited in their base claims.

VIII. Claims 22 and 24

Claims 22 and 24 was rejected for being obvious in view of a Sylvain-Toda-Hayashi or a Sylvain-Toda-Wooten combination. This rejection is traversed on grounds that the features of base claim 21 are not taught or suggested by the cited references, whether taken alone or in combination.

IX. Claims 26, 28, 37, 50-53, 59, and 66

These claims were rejected for being obvious in view of a Sylvain-Oota combination.

Claim 26 recites "displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side terminal." These features are not taught or suggested by the Sylvain and Oota references, whether taken alone or in combination.

The Examiner relied on Paragraph [31] of the Oota publication for the displaying step of claim 26. However, upon closer reading it is clear that Paragraph [31] of Oota displays the battery status of the user's own terminal, not the battery status of the other party's terminal, e.g., in Figs. 3A-3D, the battery icon corresponds to the battery status of that terminal, not the other party's terminal. The only information which the Oota terminal displays of another party's terminal is the other party's mobile telephone number using a caller ID function.

Because neither reference relied on by the Examiner teaches or suggests the displaying step of claim 26, it is respectfully submitted that claim 26 and its dependent claims are allowable over a Sylvain-Oota combination.

Claim 37 recites transmitting information indicative of the operational state to a second mobile terminal, where "the operational state information is indicative of a low battery voltage condition of the called terminal." These features are not taught or suggested by the Sylvain and Oota references, whether taken alone or in combination.

Claim 50 recites that "the operational state information includes battery information of the first mobile terminal." The Sylvain and Oota references do not individually or collectively teach or suggest transmitting battery information of one mobile terminal to another mobile terminal. Accordingly, it is submitted that claim 50 and its dependent claims are allowable over the references of record, whether taken alone or in combination.

Claim 59 recites a mobile communication terminal which includes "a display that displays the operational state information on a second mobile terminal, wherein the operational state information is indicative of a low battery voltage condition of the other terminal or a low signal strength condition experienced by the other terminal." As previously indicated, the Sylvain and Oota publications do not individually or collectively teach or suggest these features. For at least these reasons, it is respectfully submitted that claim 59 and its dependent claims are allowable over the references of record, whether taken alone or in combination.

X. Claim 27

Claim 27 was rejected for being obvious in view of a Sylvain-Oota-Wooten combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 26, whether those references are taken alone or in combination.

XI. Claim 29

Claim 29 was rejected for being obvious in view of a Sylvain-Oota-Hayashi combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 26, whether those references are taken alone or in combination.

XII. Claim 54

Claim 54 was rejected for being obvious in view of a Sylvain-Oota-Chapman combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 50, whether those references are taken alone or in combination.

XIII. Claim 64 and 65

Claims 64 and 65 were rejcted for being obvious in view of a Sylvain-Oota combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 59, whether those references are taken alone or in combination.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

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